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10/523109

BUNG FOR A PAPER ROLL

DT05 Rec'D T/PTO 03 FEB 2005

FIELD

5 The invention relates to support elements for rolls
of sheet material, specifically to a bung for insertion
into the core of a paper roll.

BACKGROUND

10

In paper dispensers, the roll of paper within the
dispenser is supported by a piece called a bung. The
bung is inserted into the core of a paper roll and
supports the roll within the dispenser while permitting
15 rotation of the roll to dispense paper.

Generally, a bung can be of various shapes and sizes
as long as it fulfills the two-fold task of supporting
the roll and allowing rotation. Dowels running the
20 length of the paper roll, small stub-like extensions from
the sides of the dispenser, and variations of these types
have all been used in the past.

It is an object of this invention to provide a bung
25 for a paper roll that is easily inserted into the roll
and is meant for use only with a single roll.

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It is a further object of this invention to provide a bung that is dimensioned to restrict the types of paper rolls that can be inserted into a dispenser.

5 SUMMARY

The invention consists of a bung for a paper roll. The bung is comprised of a body and a roll contacting element frangibly coupled to the body. When the bung is
10 inserted into the cylindrical opening of the paper roll, the roll contacting element breaks off from the body.

Preferably, the roll contacting element is comprised of a plurality of flanges, which fold down and partially
15 surround the body. The flanges may include anchor ridges that contact the paper roll when the bung is inserted.

BRIEF DESCRIPTION OF THE DRAWINGS

20 The invention itself both as to organization and method of operation, as well as additional objects and advantages thereof, will become readily apparent from the following detailed description when read in connection with the accompanying drawings:

25 Figure 1 is a side view of a bung in an unfolded state;

Figure 2 is a top view of a bung in an unfolded state;

Figure 3 is a sectional view along line A-A of Figure 2;

Figure 4 is a perspective view of a bung in a folded state; and

5 Figure 5 is a perspective view of a folded bung inserted into a paper roll.

DETAILED DESCRIPTION

10 A bung 10 for mounting a roll of paper or a similar material in a dispenser is shown in Figure 1 in its unfolded (open) state, with additional views shown in Figures 2 and 3. The bung 10 consists of a cylindrical core 12 with a number of flanges 14 attached by frangible
15 tabs 16 to the core 12. Each flange 14 has ridges 20 for securing the flange 14 to a paper roll. The core 12 has vertical ridges 18 which abut the lower surface of the flanges 14 when the bung 10 is in a closed position (as shown in Figure 4). Each flange 14 has a lower lip 24 at
20 the bottom so that a small amount of space is maintained between the ridge 18 and the flange 14 when the bung 10 is in a closed position.

 The core 12 has a protruding end 13 that is inserted
25 into a receptacle on the dispenser (not shown) to hold the paper roll within the dispenser. The core 12 and

flanges 14 end up fully inserted into the end of the paper roll (see Figure 5). The flanges 14 are approximately the same length as the core 12.

5 Figure 4 shows the bung 10 in its folded (closed) state, ready for insertion into a paper roll. Each flange 14, is folded against the vertical ribs 18, with lower lip 24 directly abutting the ribs 18. The upper edge of the flange 14 is marked by a protruding upper lip
10 22.

In operation, the bung 10 is inserted into a roll of paper 30 as shown in Figure 5. First, the flanges 14 are folded down from the open state (Figure 1) to the closed
15 state (Figure 4). Once closed, the bung 10 is inserted into the roll of paper 30 until the core 12 is fully within the roll 30. Then, the frangible tabs 16 (as shown in Figure 1) are broken to detach the core 12 from the flanges 14.

20 At this point, the bung 10 is fully inserted into the paper roll 30. If core 12 is removed, then the flanges 14 will no longer remain in the paper roll and will fall out. At that point, the bung 10 cannot be
25 reassembled without significant time and effort. As a result, the bung 10 is a single-use item, and must be

disposed of (preferably recycled) and a new bung 10 is required for each paper roll 30.

It is most likely that the bung 10 will be inserted
5 into the paper roll 30 at the time of manufacture of the roll 30. If so, the manufacturer can gain an additional advantage by shaping the protruding end 13-of the core 12 of the bung 10 to fit only in a predetermined dispenser. Thus, by designing a dispenser to only accept a
10 corresponding end 13, the manufacturer can limit the types of paper rolls used in the dispenser, as the bung 10 will not fit into a non-compliant dispenser, nor will non-compliant bungs (and paper rolls) fit into a dispenser which is configured for the bung 10.

15 Accordingly, while this invention has been described with reference to illustrative embodiments, this description is not intended to be construed in a limiting sense. Various modifications of the illustrative
20 embodiments, as well as other embodiments of the invention, will be apparent to persons skilled in the art upon reference to this description. It is therefore contemplated that the appended claims will cover any such modifications or embodiments as fall within the scope of
25 the invention.

WE CLAIM:

1. A bung for a paper roll having a cylindrical opening, comprising:

5 a) a body; and

b) a roll contacting element frangibly coupled to said body and operative to break when said bung is inserted into said cylindrical opening.

10 2. The bung according to claim 1, wherein said roll contacting element is comprised of a plurality of flanges that fold down to partially surround said body.

3. The bung according to claim 2, wherein said
15 plurality of flanges are three in number.

4. The bung according to claim 2, wherein each flange in said plurality of flanges has anchor ridges for contacting said paper roll.

ABSTRACT

The invention consists of a bung for a paper roll.

The bung is comprised of a body and a roll contacting
5 element frangibly coupled to the body. When the bung is
inserted into the cylindrical opening of the paper roll,
the roll contacting element breaks off from the body.

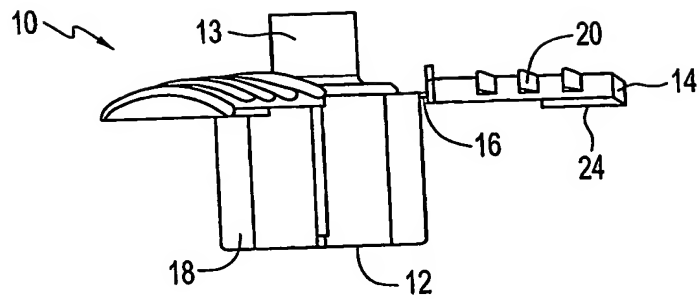


FIG. 1

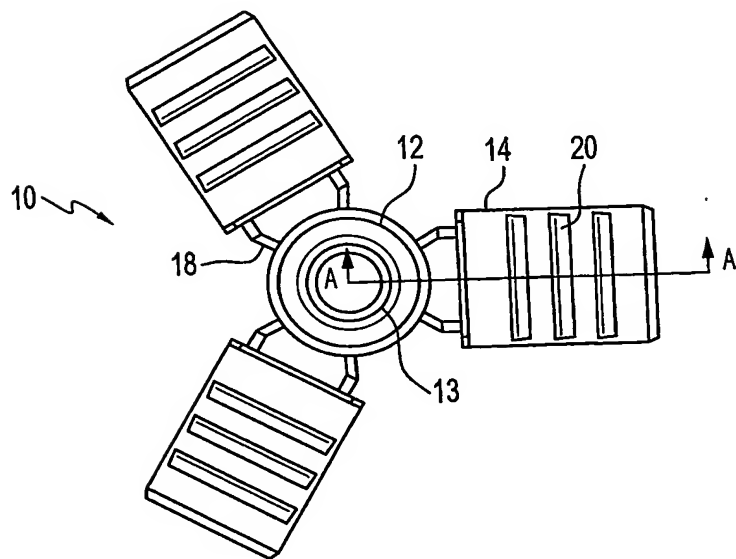


FIG. 2

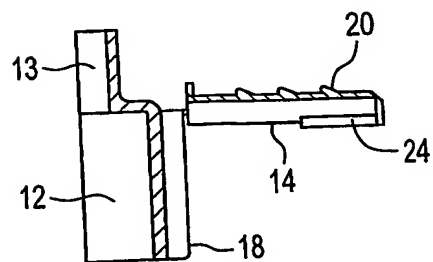


FIG. 3

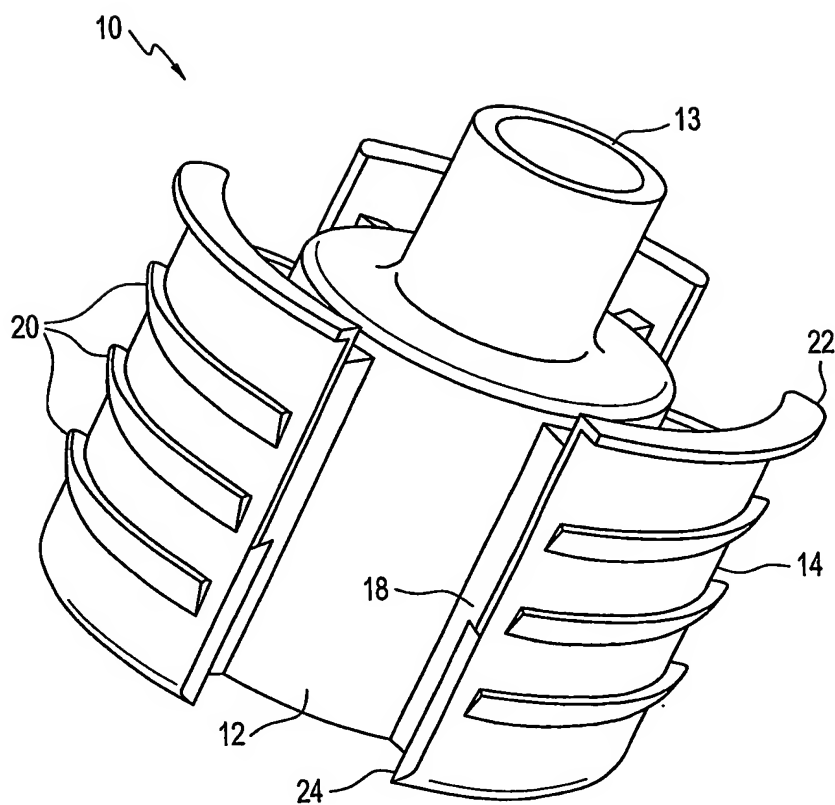


FIG. 4

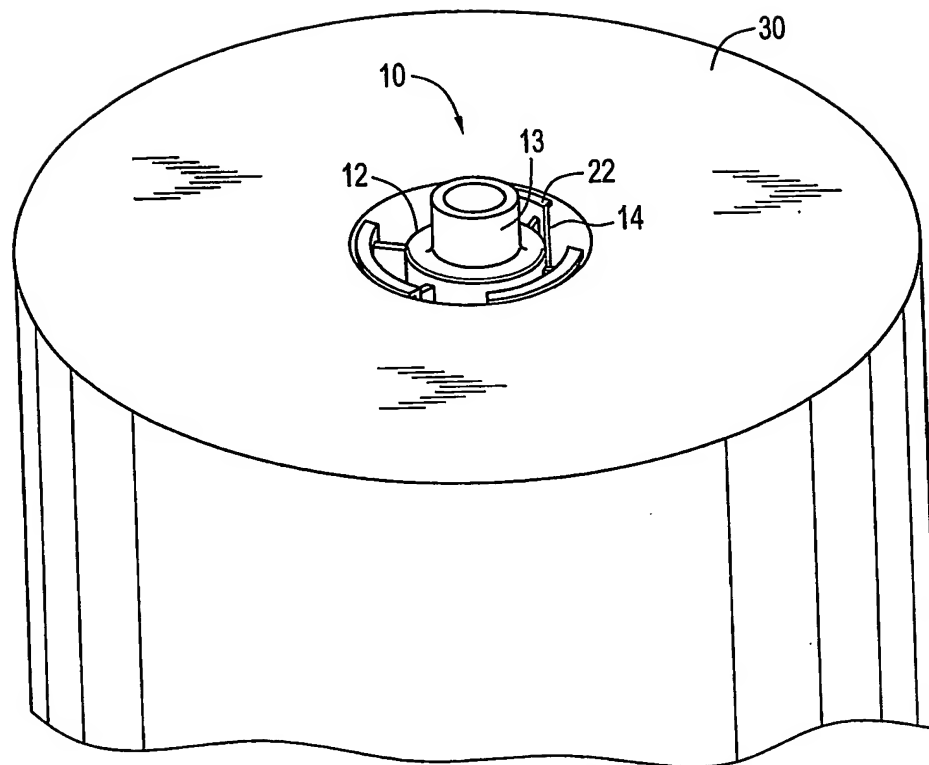


FIG. 5

INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 03/00927

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 B65H75/18 A47K10/40

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A47K B65H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 362 375 A (BENEDETTI INTERNATIONAL PLC) 21 November 2001 (2001-11-21) page 7, line 8 - line 16; figure 4	1
A	US 4 032 077 A (D. S. BASELICE) 28 June 1977 (1977-06-28)	
A	US 5 163 725 A (M. A. LEWEALLYN) 17 November 1992 (1992-11-17)	
A	US 3 438 589 A (P.W. JESPERSEN) 15 April 1969 (1969-04-15)	

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

10 October 2003

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23/10/2003

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 03/00927

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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